Chapter 2

Crash Data

Crash Data

- The DMV crash database (CRASH) contains information on all reported crashes in North Carolina since January 1, 1990

- Each year there are approximately 225,000 reportable crashes added to CRASH

- There is usually a 2-3 month backlog in the manual data entry of crash data, 1-2 week backlog for electronically submitted data (TraCS, etc.)

Reportable Crashes

A reportable crash is a crash where:

- A fatality occurred
- A non-fatal injury occurred
- Property damage of at least $1,000 occurred
- A seized vehicle was damaged (any amount)

Levels of Crash Data

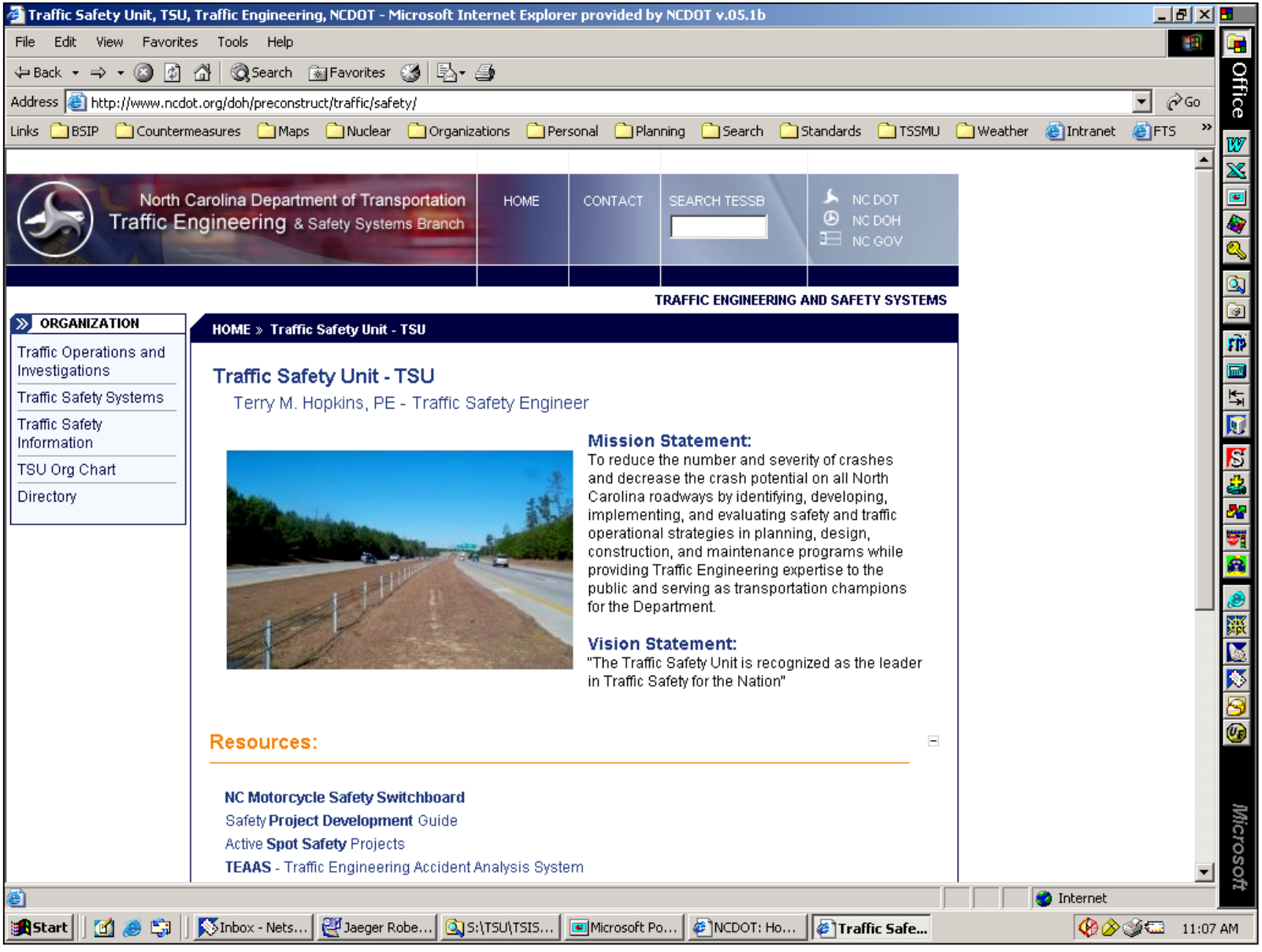
There are 3 levels of crash data:

- Crash level - data specific to the crash regardless of units or persons involved (such as location, time of day, weather conditions, etc.)

- Unit level - data specific to each individual unit regardless of the persons in that unit (such as speed, vehicle type, vehicle maneuver, etc.)

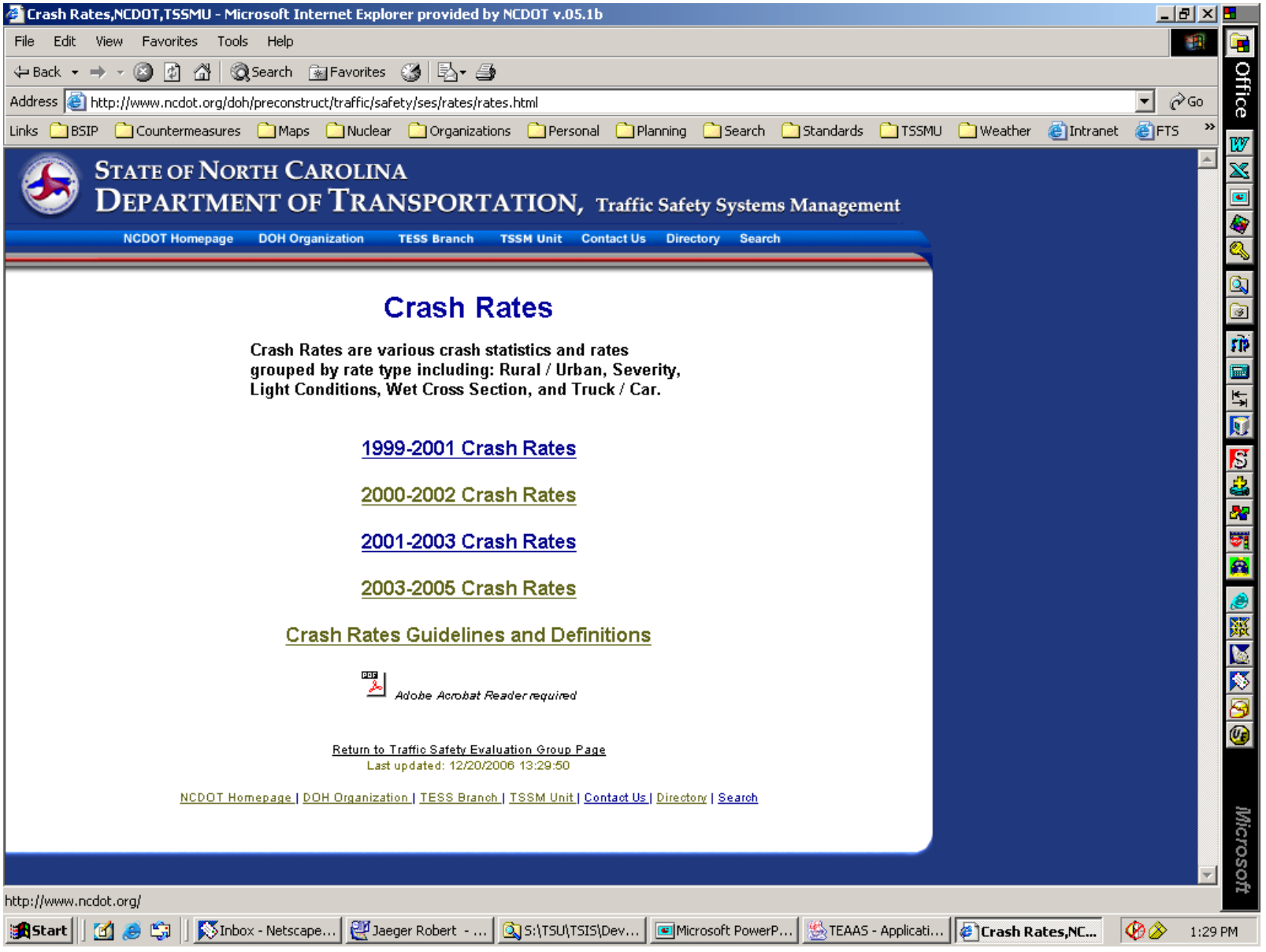
- Person level - data specific to each individual (such as age, race, gender, injury, etc.)

NCDOT's Traffic Safety Unit



http://www.ncdot.org/doh/preconstruct/traffic/safety/

Crash Rates



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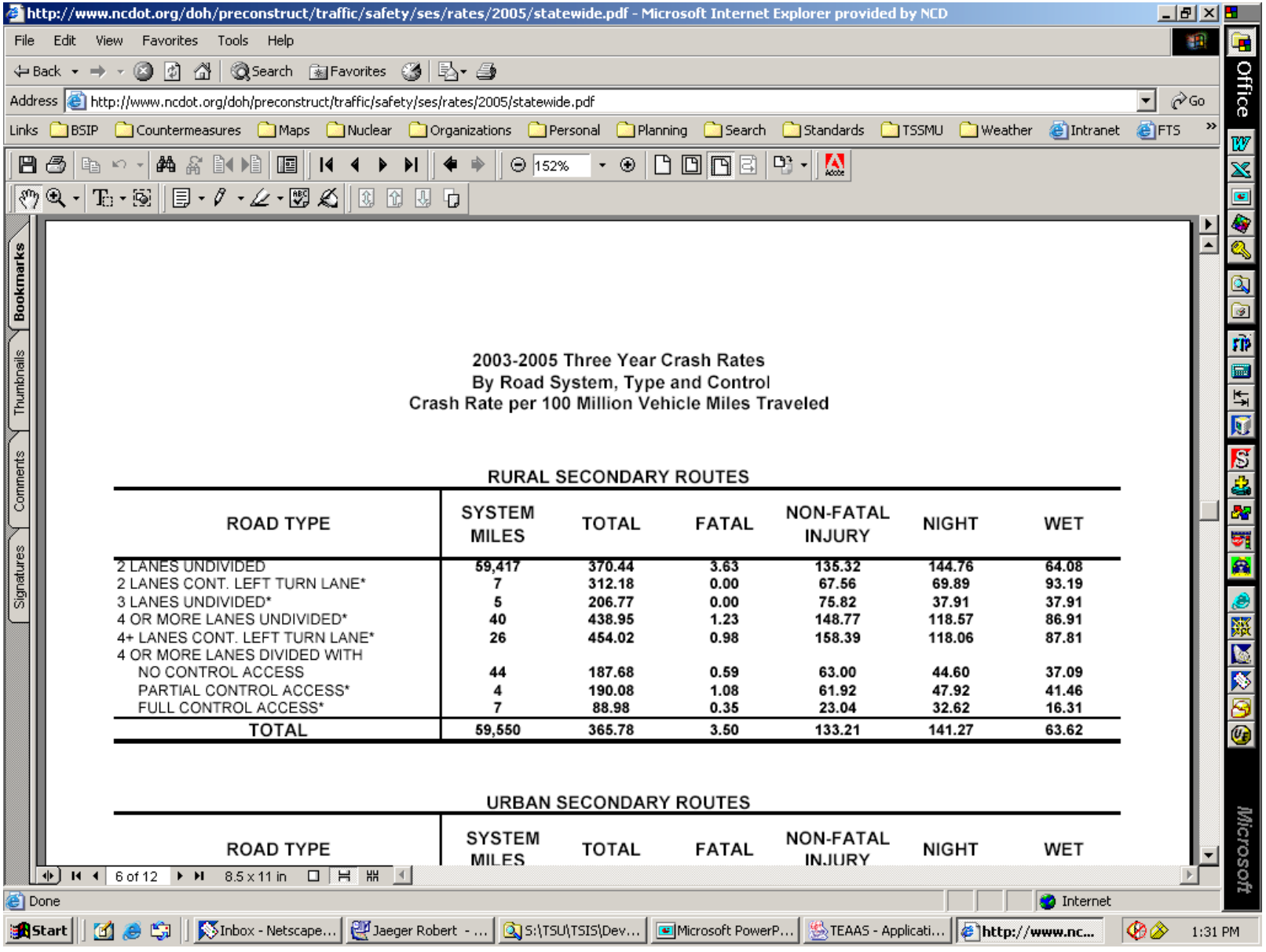
Crash Rates (cont.)



2003-2005 Three Year Crash Rates
By Road System, Type and Control
Crash Rate per 100 Million Vehicle Miles Traveled

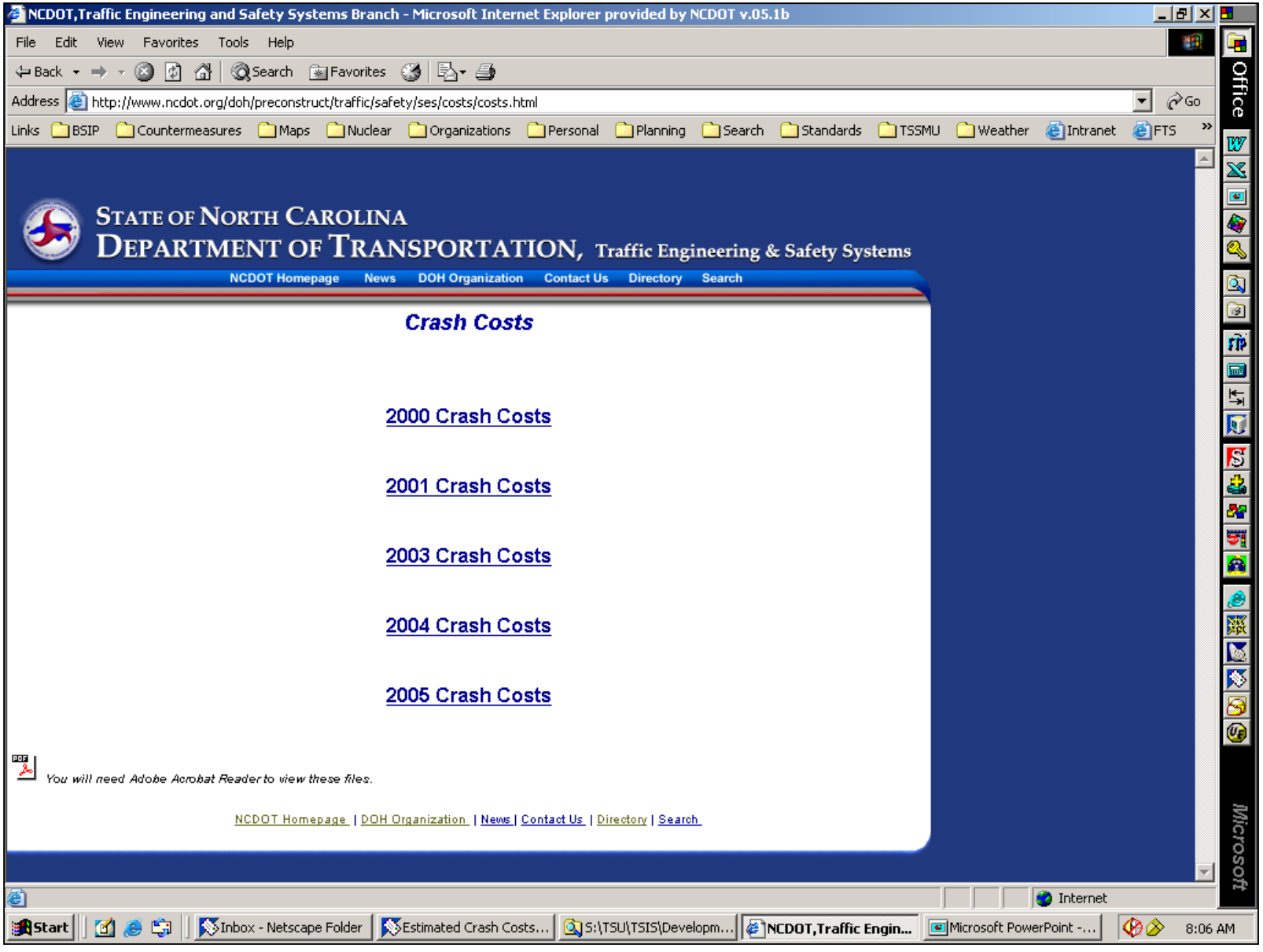
RURAL SECONDARY ROUTES

ROAD TYPE	SYSTEM MILES	TOTAL	FATAL	NON-FATAL INJURY	NIGHT	WET
2 LANES UNDIVIDED	59,417	370.44	3.63	135.32	144.76	64.08
2 LANES CONT. LEFT TURN LANE*	7	312.18	0.00	67.56	69.89	93.19
3 LANES UNDIVIDED*	5	206.77	0.00	75.82	37.91	37.91
4 OR MORE LANES UNDIVIDED*	40	438.95	1.23	148.77	118.57	86.91
4+ LANES CONT. LEFT TURN LANE*	26	454.02	0.98	158.39	118.06	87.81
4 OR MORE LANES DIVIDED WITH						
NO CONTROL ACCESS	44	187.68	0.59	63.00	44.60	37.09
PARTIAL CONTROL ACCESS*	4	190.08	1.08	61.92	47.92	41.46
FULL CONTROL ACCESS*	7	88.98	0.35	23.04	32.62	16.31
TOTAL	59,550	365.78	3.50	133.21	141.27	63.62

URBAN SECONDARY ROUTES

ROAD TYPE	SYSTEM MILES	TOTAL	FATAL	NON-FATAL INJURY	NIGHT	WET

Comprehensive Crash Costs



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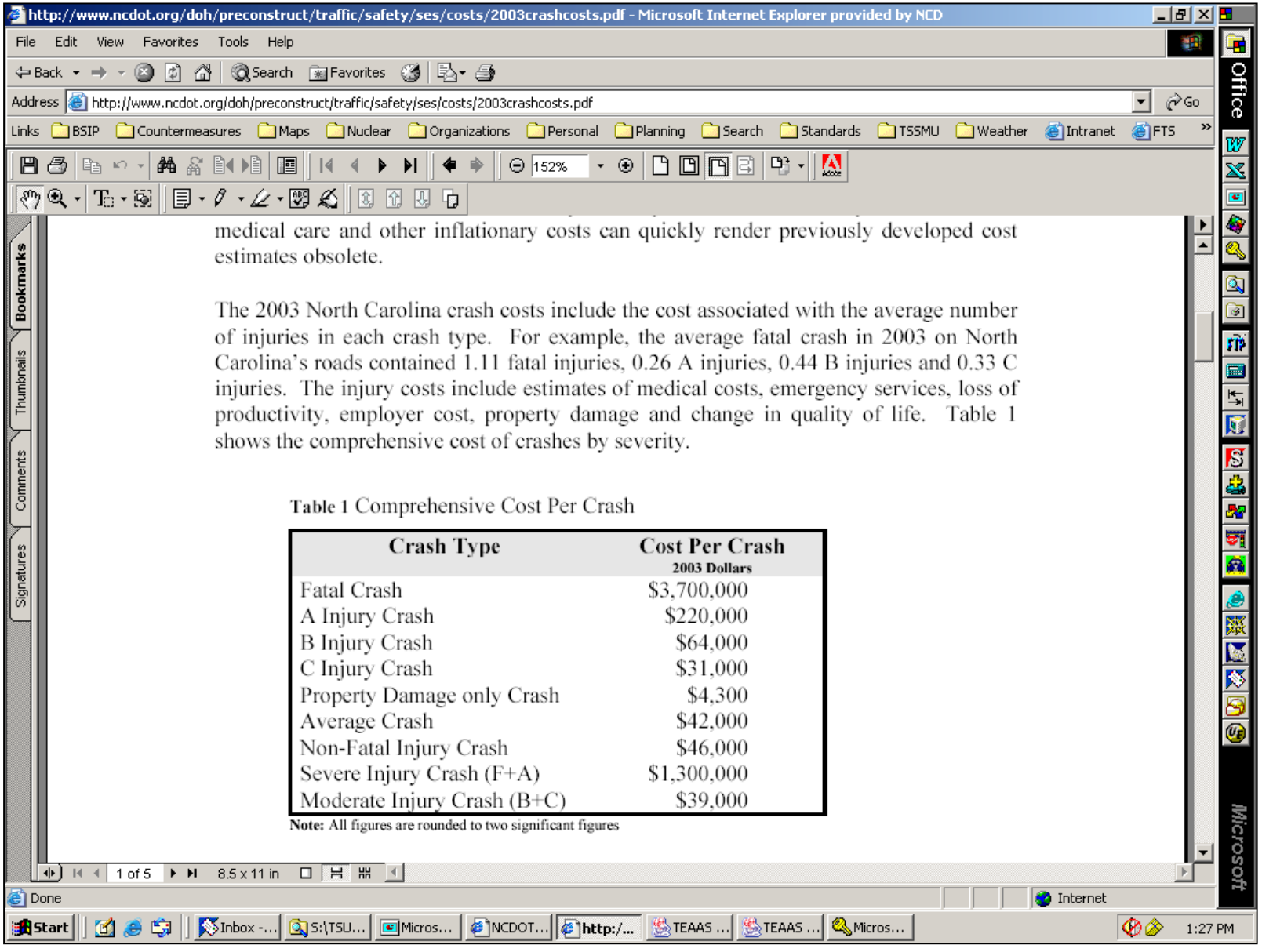
Comprehensive Crash Costs (cont.)



medical care and other inflationary costs can quickly render previously developed cost estimates obsolete.

The 2003 North Carolina crash costs include the cost associated with the average number of injuries in each crash type. For example, the average fatal crash in 2003 on North Carolina's roads contained 1.11 fatal injuries, 0.26 A injuries, 0.44 B injuries and 0.33 C injuries. The injury costs include estimates of medical costs, emergency services, loss of productivity, employer cost, property damage and change in quality of life. Table 1 shows the comprehensive cost of crashes by severity.

Table 1 Comprehensive Cost Per Crash

Crash Type	Cost Per Crash 2003 Dollars
Fatal Crash	$3,700,000
A Injury Crash	$220,000
B Injury Crash	$64,000
C Injury Crash	$31,000
Property Damage only Crash	$4,300
Average Crash	$42,000
Non-Fatal Injury Crash	$46,000
Severe Injury Crash (F+A)	$1,300,000
Moderate Injury Crash (B+C)	$39,000

Note: All figures are rounded to two significant figures

NCDOT Identification and Mitigation

- Safety Planning - reviewing projects from a safety perspective

- Fatal Investigations - analyzing and investigating locations where fatalities occur

- Highway Safety Improvement Program (HSIP) - identifying and analyzing locations that meet minimum safety warranting criteria

- Evaluations - reviewing countermeasures to determine their effectiveness

- Road Safety Reviews - objective team review of roads meeting minimum crash criteria